Exhibit R-2, RDT&E Budget Item Justification: PB 2013 United States Special Operations Command

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

0400: Research, Development, Test & Evaluation, Defense-Wide

PE 1160479BB: SOF Visual Augmentation, Lasers and Sensor Systems

DATE: February 2012

BA 7: Operational Systems Development

| COST (\$ in Millions) | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO | FY 2013 Total | FY 2014 | FY 2015 | FY 2016 | FY 2017 | Cost To Complete | Total Cost |
|---|---------|---------|-----------------|----------------|------------------|---------|---------|---------|---------|---------------------|------------|
| Total Program Element | - | 3.000 | 4.448 | - | 4.448 | - | - | - | - | Continuing | Continuing |
| S395: SOF Visual Augmentation, Lasers and Sensor Systems | - | 3.000 | 4.448 | - | 4.448 | - | - | - | - | Continuing | Continuing |

A. Mission Description and Budget Item Justification

This program element provides for development, testing, and integration of specialized visual augmentation, laser and sensor systems equipment to meet the unique requirements of Special Operations Forces (SOF). Specialized equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. These operations are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy. SOF must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to enemy threats to ensure mission success.

| B. Program Change Summary (\$ in Millions) | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO | FY 2013 Total |
|---|---------|---------|--------------|-------------|---------------|
| Previous President's Budget | _ | 3.000 | 2.395 | - | 2.395 |
| Current President's Budget | - | 3.000 | 4.448 | - | 4.448 |
| Total Adjustments | - | - | 2.053 | - | 2.053 |
| Congressional General Reductions | - | - | | | |
| Congressional Directed Reductions | - | - | | | |
| Congressional Rescissions | - | - | | | |
| Congressional Adds | - | - | | | |
| Congressional Directed Transfers | - | - | | | |
| Reprogrammings | - | - | | | |
| SBIR/STTR Transfer | - | - | | | |
| Other Adjustments | - | - | 2.053 | - | 2.053 |

Change Summary Explanation

Funding:

FY 2011: None.

FY 2012: None.

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| Exhibit R-2, RDT&E Budget Item Justification: PB 2013 United Sta | ates Special Operations Command | DATE: February 2012 |
|--|--|---------------------|
| APPROPRIATION/BUDGET ACTIVITY | R-1 ITEM NOMENCLATURE | |
| 0400: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development | PE 1160479BB: SOF Visual Augmentation, | • |
| FY 2013: Net increase of \$2.053 million is due to a reprogran development and integration of operator-borne visual augmen assumption increase of \$0.053 million. | | |
| Schedule: None. | | |
| Technical: None. | | |
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PE 1160479BB: SOF Visual Augmentation, Lasers and Sensor Systems United States Special Operations Command

| EXHIBIT K-2A, KDT&E Project Just | incation: Pr | 5 ZU IS UTILLE | d States Sp | | DATE. February 2012 | | | | | | |
|--|---|----------------|-----------------|----------------|---------------------|-------------------------------------|----------|------------------------------------|----------|---------------------|------------|
| APPROPRIATION/BUDGET ACTIV 0400: Research, Development, Test BA 7: Operational Systems Develop | Research, Development, Test & Evaluation, Defense-Wide Operational Systems Development COST (\$ in Millions) | | | | | T URE isual Augme fems | ntation, | PROJECT S395: SOF Sensor Sys | sers and | | |
| COST (\$ in Millions) | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO | FY 2013 Total | FY 2014 | FY 2015 | FY 2016 | FY 2017 | Cost To Complete | Total Cost |
| S395: SOF Visual Augmentation, Lasers and Sensor Systems | - | 3.000 | 4.448 | - | 4.448 | - | - | - | - | Continuing | Continuing |
| Quantity of RDT&E Articles | | | | | | | | | | | |

A. Mission Description and Budget Item Justification

Exhibit P 24 PDT8 E Project Justification: PR 2013 United States Special Operations Command

This project provides for development, testing and integration of specialized visual augmentation, laser and sensor system equipment to meet the unique requirements of Special Operations Forces(SOF). Specialized equipment will permit small, highly trained forces to conduct required operations within harsh environments, for unspecified periods and in locations requiring small unit autonomy. SOF must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorist, or highly sophisticated threat mandates that SOF systems remain technologically superior to enemy threats to ensure mission success.

- Visual Augmentation Systems (VAS). This program develops, buys prototypes, and fields operator-borne night vision devices for SOF. These devices provide the SOF operator the ability to maneuver, conduct fire control operations, and perform surveillance and reconnaissance. Research and Development efforts will develop, test, and evaluate prototype systems of the next generation fusion system.
- These Visual Augmentation Systems will provide an all-weather, low-light capability for SOF personnel by employing a Block approach. This Block approach produces a family of VAS systems which will utilize a variety of different sensor technologies to satisfy the capabilities defined by individual Block requirement. Some examples of the types of sensor technologies that these systems may utilize include: Image Intensification, Thermal, Short Wave Infrared (SWIR) and/or multi-spectral. To date the Target Engagement Portfolio has utilized several Block system approaches that have been fielded by the VAS program. These VAS programs will be a developmental effort to produce and field the next generation systems for SOF personnel. Some of the capability shortfalls identified by the SOF community are the following: (1) ability to detect, classify, and engage targets out to 800 m without the use of an infra-red illuminator; (2) ability to determine wind speed at ranges out to 500 m or greater and (3) ability to observe bullet trace at ranges of 800 m or greater.

| B. Accomplishments/Planned Programs (\$ in Millions) | | | FY 2013 | FY 2013 | FY 2013 |
|--|---------|---------|---------|---------|---------|
| | FY 2011 | FY 2012 | Base | OCO | Total |
| Title: VAS | - | 3.000 | 4.448 | - | 4.448 |
| FY 2012 Plans: Initiates the development of the next generation of operator-borne visual augmentation devices to improve situational awareness, sharing of data/images and target acquisition. | | | | | |
| FY 2013 Base Plans: Continue the development of the next generation of operator-borne visual augmentation devices to improve situational awareness, sharing of data/images and target acquisition. The primary capability shortfalls addressed | | | | | |

DATE: February 2012

| Exhibit R-2A, RDT&E Project Justification: PB 2013 United States Special Operations Command | DATE: February 2012 |
|---|----------------------------|
| | |

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE

PROJECT PE 1160479BB: SOF Visual Augmentation, S395: SOF Visual Augmentation, Lasers and 0400: Research, Development, Test & Evaluation, Defense-Wide

BA 7: Operational Systems Development Lasers and Sensor Systems Sensor Systems

| B. Accomplishments/Planned Programs (\$ in Millions) | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO | FY 2013 Total |
|--|---------|---------|-----------------|----------------|------------------|
| include the following under all lighting conditions: (1) Ability to detect, classify, and engage targets out to 800 m without the use of an infra-red illuminator; (2) Ability to determine wind speed at ranges out to 500 m or greater; and (3) Ability to observe bullet trace at ranges of 800 m or greater. | | | | | |
| Accomplishments/Planned Programs Subtotals | - | 3.000 | 4.448 | - | 4.448 |

C. Other Program Funding Summary (\$ in Millions)

| | | | FY 2013 | FY 2013 | FY 2013 | | | | | Cost To | |
|-----------------|---------|---------|-------------|---------|--------------|---------|---------|---------|---------|-----------------|-------------------|
| Line Item | FY 2011 | FY 2012 | <u>Base</u> | OCO | <u>Total</u> | FY 2014 | FY 2015 | FY 2016 | FY 2017 | Complete | Total Cost |
| • PROC1: VISUAL | 43.090 | 19.289 | 33.920 | 0.108 | 34.028 | 18.532 | 18.610 | 14.589 | 11.213 | Continuing | Continuing |

AUGMENTATION. LASERS AND SENSOR SYSTEMS

D. Acquisition Strategy

• VAS utilizes FY 2012 and FY 2013 RDT&E funds to develop prototypes for the SOF next generation soldier-borne visual augmentation devices. These developmental efforts will leverage Science and Technology projects conducted to date and lead to the development of prototype systems for SOF to evaluate and an Indefinite Delivery Indefinite Quantity production contract in FY 2014 to support SOF procurement of the production version of the next generation soldier-borne visual augmentation devices.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 United States Special Operations Command

DATE: February 2012

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE

0400: Research, Development, Test & Evaluation, Defense-Wide

BA 7: Operational Systems Development

PE 1160479BB: *SOF Visual Augmentation*,

Lasers and Sensor Systems

PROJECT

S395: SOF Visual Augmentation, Lasers and

Sensor Systems

| Product Development | (\$ in Millio | ns) | | FY 2 | 2012 | FY 2 Ba | | | 2013 CO | FY 2013 Total | | | |
|----------------------------|------------------------------|---|------------------------------|-------|---------------|------------|---------------|------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| VAS | C/FFP | Joint Special Operations Program Office:Crane, IN | 1.015 | 2.800 | Jun 2012 | 3.453 | Jun 2013 | - | | 3.453 | Continuing | Continuing | |
| Prior Year Funding | C/CPFF | PM Sensors and Lasers:Ft Belvoir, VA | 7.844 | - | | - | | - | | - | Continuing | Continuing | |
| | | Subtotal | 8.859 | 2.800 | | 3.453 | | - | | 3.453 | | | |

| Test and Evaluation (\$ | in Millions | 3) | | FY 2 | 2012 | FY 2 Ba | 2013 se | | 2013 CO | FY 2013 Total | | | |
|-------------------------|------------------------------|---|------------------------------|-------|---------------|------------|---------------|------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| VAS | C/CPFF | Joint Special Operations Program Office:Crane, IN | - | 0.200 | Jan 2012 | 0.995 | Jan 2013 | - | | 0.995 | Continuing | Continuing | |
| Prior Year Funding | C/CPFF | HQ USSOCOM:Tampa, FL | 2.390 | - | | - | | - | | - | Continuing | Continuing | |
| | | Subtotal | 2.390 | 0.200 | | 0.995 | | - | | 0.995 | | | |

| | Total Prior | | | | | | | | Target |
|---------------------|-------------|---------|---------|------|------|---------|----------|------------|----------|
| | Years | | FY 2013 | FY 2 | 2013 | FY 2013 | Cost To | | Value of |
| | Cost | FY 2012 | Base | 00 | co | Total | Complete | Total Cost | Contract |
| Project Cost Totals | 11.249 | 3.000 | 4.448 | - | | 4.448 | | | |

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 United States Special Operations Command

APPROPRIATION/BUDGET ACTIVITY
0400: Research, Development, Test & Evaluation, Defense-Wide
BA 7: Operational Systems Development

FY 2011

FY 2012

PROJECT
S395: SOF Visual Augmentation, Sample Sensor Systems

PROJECT
S395: SOF Visual Augmentation, Sample Sensor Systems

FY 2011

FY 2012

FY 2013

FY 2014

FY 2015

FY 2016

FY 2017

| | | FY 2011 | | | FY 2011 FY 2012 F | | | | | FY 2013 FY 2014 | | | FY 2015 | | | | | FY 2 | 2016 | | FY 2017 | | | • | | | | |
|---|---|---------|---|---|-------------------|---|---|---|---|-----------------|---|---|---------|---|---|---|---|------|------|---|---------|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Visual Augmentation System Binocular/ Monocular | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development of the Next Generation Soldier- borne Night Vision Devices | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integration and Testing of the Next Generation Soldier-borne Night Vision Devices | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development of the Next Generation Night Vision Devices for Target Engagement Systems | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integration and Testing of the Next Generation Night Vision Devices for Target Engagement Systems | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Exhibit R-4A, RDT&E Schedule Details: PB 2013 United States Special Operations Command

APPROPRIATION/BUDGET ACTIVITY

0400: Research, Development, Test & Evaluation, Defense-Wide

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 1160479BB: SOF Visual Augmentation,

Lasers and Sensor Systems

PROJECT

S395: SOF Visual Augmentation, Lasers and

DATE: February 2012

Sensor Systems

Schedule Details

| | Start | | End | |
|---|---------|------|---------|------|
| Events by Sub Project | Quarter | Year | Quarter | Year |
| Visual Augmentation System Binocular/Monocular | | - | | |
| Development of the Next Generation Soldier-borne Night Vision Devices | 1 | 2012 | 4 | 2013 |
| Integration and Testing of the Next Generation Soldier-borne Night Vision Devices | 3 | 2013 | 2 | 2014 |
| Development of the Next Generation Night Vision Devices for Target Engagement Systems | 2 | 2013 | 2 | 2014 |
| Integration and Testing of the Next Generation Night Vision Devices for Target Engagement Systems | 2 | 2014 | 2 | 2015 |

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